CLAIMS

1. A particulate water retaining material for cultivating plant comprising (A) a carboxylic group-containing water-insoluble water absorbent resin and (B) a polyvalent metal compound, which material exhibits an absorbing speed (absorption capacity in deionized water for 10 minutes) in the range of 20 - 500 g/g and has a weight average particle diameter in the range of 200 - 10,000 μm.

2. A particulate water retaining material for cultivating plant comprising (A) a carboxylic group-containing water-insoluble water absorbent resin and (B) a polyvalent metal compound, and which material exhibits a calcium gradual release index of more than 0 and not more than 50 mg/L and has a weight average particle diameter in the range of 200 - 10,000 μm.

3. A particulate water retaining material for cultivating plant according to claim 1 or claim 2, wherein the calcium gradual release index is in the range of 1.0 - 20 mg/L and a saturated absorption capacity is in the range of 20 - 1,000 g/g.

4. A particulate water retaining material for cultivating plant according to any of claims 1 to 3, wherein (B) the polyvalent metal compound is contained in the range of 10 - 50 wt. % based on in the weight of said water retaining material for cultivating plant.

5. A particulate water retaining material for cultivating plant according to any of claims 1 to 4, wherein (B) said polyvalent metal compound is present on the surface of (A) said water absorbent resin.

6. A particulate water retaining material for cultivating plant according to claim 5, wherein (B) said polyvalent metal compound adheres to and/or coats or deposits

on the surface of (A) said water absorbent resin.

7. A particulate water retaining material for cultivating plant according to any of claims 1 to 6, wherein (B) said polyvalent metal compound in the range of 10 - 50 wt. % based on said particulate water retaining material for cultivating plant is present on the surface of (A) said water absorbent resin.

8. A particulate water retaining material for cultivating plant according to any of claims 1 to 7, wherein the amount of the monovalent counterion of the carboxyl group possessed by (A) said water absorbent resin is in the range of 5 - 75 mol% based on the mol number of said carboxyl group.

9. A particulate water retaining material for cultivating plant according to any of claims 1 to 8, wherein the water content is in the range of 1 - 30 wt. %.

10. A particulate water retaining material for cultivating plant according to any of claims 1 to 9, wherein the solubility of (B) said polyvalent metal compound in 100 g of deionized water at 20°C is more than 0 and not more than 10.0g.

11. A particulate water retaining material for cultivating plant according to any claims 1 to 10, wherein (B) said polyvalent metal compound contains calcium essentially and also contains at least one element selected from the group consisting of magnesium, iron, and silicon.

12. A particulate water retaining material for cultivating plant according to any of claims 1 to 11, wherein (B) said polyvalent metal compound contains a calcium compound.

13. A particulate water retaining material for cultivating plant according to any of claims 1 to 12, wherein (B) said polyvalent metal compound contains at least one

compound selected from the group consisting of calcium sulfate, calcium hydroxide, and calcium carbonate.

14. A particulate water retaining material for cultivating plant according to any of claims 1 to 10, wherein (B) said polyvalent metal compound is an ash of incineration.

15. A particulate water retaining material for cultivating plant according to any of claims 1 to 14, wherein (A) said water absorbent resin is a polymer obtained by polymerizing acrylic acid and/or a salt thereof as a monomer.

16. A particulate water retaining material for cultivating plant according to any of claims 1 - 15, wherein the amount of a soluble component of (A) said water absorbent resin is less than 10 wt. %.

17. A method for the production of a water retaining material for cultivating plant comprising (A) a carboxylic acid-group containing water-insoluble particulate water absorbent resin and (B) a polyvalent metal compound, which method comprises a step of mixing (A) said water absorbent resin in a state having a water content in the range of 0 - 50 wt. % and (B) said polyvalent metal compound in the range of 10 - 50 wt. % based on the weight of the solid component of (A) said water absorbent resin in a form of solution or a slurry.

18. A method for the production of a water retaining material for cultivating plant comprising (A) a carboxylic acid-containing water-insoluble particulate water absorbent resin and (B) a polyvalent metal compound, which method comprises a step of mixing (A) said water absorbent resin having a water content in the range of 50 - 20 wt. % and (B) said polyvalent metal compound in the form of a slurry or a powder containing said polyvalent metal compound at a concentration of not less than 50 wt. %.

19. A method for the production of a water retaining material for cultivating plant comprising (A) a carboxylic acid-containing water-insoluble particulate water absorbent resin and (B) a polyvalent metal compound, which method comprises a step of mixing (A) said water absorbent resin in the state of a powder having a water content in the range of 0 - 20 wt. % and (B) said polyvalent metal compound in the state of a powder and subsequently adding the resultant mixture and an aqueous liquid or steam together and mixing them.

20. A method according to any of claims 17 to 19, wherein (A) said water absorbent resin is a polymer obtained by polymerizing acrylic acid and/or a salt thereof as a monomer.

21. A method for cultivating plant by using a particulate water retaining material for cultivating plant obtained by any one of claims 1 - 16.

22. A method for cultivating plant according to claim 21, wherein said particulate water retaining material for cultivating plant is mixed with other plant growth grade carrier and the incorporated amount is in the range of 1 - 30 wt. %.